

**ABSTRACT**

A method and apparatus for treating a fluid. A method for treating a fluid may include combining two or more separate streams into a common stream and then splitting the common stream into a new set of separate streams wherein the separate streams may  
5 possess different properties. The separate streams may be combined to produce a gradient, such as a concentration gradient or shear gradient. The apparatus of the invention may provide a network of fluidic channels that may be used to manipulate a fluid to produce, for example, a gradient or a series of solutions containing a substance at varying concentrations.